

REMARKS

Claims 1-34 are now pending in the application and stand rejected. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-8 and 14-24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Klopp et al. (U.S. Pat. No. 6,148,613). Claims 9-13 and 25-34 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Frederiksen et al, (U.S. Pat. No. 6,312,650). These rejections are respectfully traversed.

Claims 1 teaches a method of reducing exhaust emissions that recites including at least one catalytic converter having a catalyst brick positioned within a predefined length of the vehicle and directing exhaust in upstream and downstream directions to pass more than once through the predefined length through the catalyst brick. Furthermore, the method calls for the exhaust to enter the catalytic converter at a first end of a symmetrical axis of the catalytic converter and to exit the catalytic converter at a second end opposite the first end.

Klopp et al. fails to teach or disclose including a catalytic converter having a catalyst brick positioned within a predefined length of the vehicle and directing exhaust in upstream and downstream directions to pass more than once through the predefined length through the catalyst brick where the exhaust enters the catalytic converter at a first end of a symmetrical axis of the catalytic converter and exits the catalytic converter at a second end opposite the first end. In contrast, Figures 6a and 6b of Klopp et al.

teach introducing exhaust gas into the exhaust gas inlet 16 and discharging the exhaust gas via the exhaust gas outlet 18. The exhaust gas inlet 16 and the exhaust gas outlet 18 are positioned on the same end of the container 12 of the catalytic converter. Figure 8 of Klopp et al. discloses a converter container having ports at opposite ends but fails to teach directing exhaust in upstream and downstream directions to pass more than once through the predefined length through the catalyst brick as recited by the present invention.

In view of the foregoing, Klopp et al. fails to teach or suggest including a catalytic converter having a catalyst brick positioned within a predefined length of the vehicle and directing exhaust in upstream and downstream directions to pass more than once through the predefined length through the catalyst brick where the exhaust enters the catalytic converter at a first end of a symmetrical axis of the catalytic converter and exits the catalytic converter at a second end opposite the first end.

Therefore, Claim 1 is allowable over Klopp et al. for at least these reasons. Applicant notes that independent Claim 14 recites similar subject matter, and thus should be allowable for at least the same reasons as Claim 1. With regards to Claims 2-8 and 15-24, Applicant notes that each ultimately depends from Claim 1 and Claim 14, respectively, and are also allowable for at least similar reasons. Reconsideration and withdrawal of the rejections are respectfully requested.

Claim 9 recites a method for reducing exhaust emission from a catalytic converter that includes exposing the exhaust to a catalytic surface area of a catalytic converter while making a pass-through of the apparatus and effecting a transfer to a central core of the catalyst surface area and of the converter of heat remaining in the

exhaust after being exposed to said central core where at least one directing element of the catalytic converter directs the exhaust to pass across the catalytic surface area more than once during the pass-through of the apparatus.

Frederiksen et al. fails to teach or suggest directing the exhaust to pass across the catalytic surface area more than once during the pass-through of the apparatus as taught by the present invention. In contrast, Frederiksen et al. teaches directing the exhaust flow to pass a single time through each of the individual monoliths of the apparatus as illustrated in Figures 1 and 4 – 11.

Therefore, Claim 9 is allowable over Frederiksen et al. for at least these reasons. Applicant notes that independent Claim 25 recites similar subject matter, and thus should be allowable for at least the same reasons as Claim 9. With regards to Claims 10 – 13 and 26 – 34, Applicant notes that each ultimately depends from Claim 9 and Claim 25, respectively, and are also allowable for at least similar reasons. Reconsideration and withdrawal of the rejections are respectfully requested.

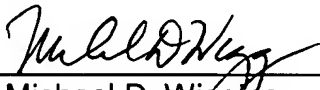
CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: October 12, 2006

By: 
Michael D. Wiggins
Reg. No. 34,754

General Motors Corporation
300 Renaissance Center
M.C. 482-C23-B21
P.O. Box 300
Detroit, MI 48265-3000